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ABSTRACT

This teacher's guide introduces a series of instructional materials in vocational education for use in bilingual English-Spanish vocational programs. The narrative-format guide first provides a model with flowchart of a bilingual vocational education program. The program's components include pretraining assessment, counseling and individualized program of study, vocational and English-as-a-second-language components of the program, posttraining assessment, and job placement. Following the model, the first part of the guide covers the background and essential elements of a bilingual vocational program. Topics discussed include the following: the vocational staff and their characteristics, developing instructional materials, planning the language component, and linguistic aspects of vocational English. The second section of the guide presents teaching strategies and techniques to be used in the bilingual program, such as basic learning principles, characteristics of a lesson, lesson plans, self-instructional modules, handouts, slides and transparencies, simulation activities, lectures, demonstration techniques, student activities, and team teaching. The final section provides directions for developing an individualized instructional program. (KC)

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# BILINGUAL VOCATIONAL INSTRUCTIONAL MATERIALS

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Course Syllabus for Nurses' Aids, Orderlies, and Vocational Nurse Education from Neal McBryde, Dean of Nursing, Bee County College, Beeville, Texas: Excerpts (credited in text).

Building Trades: Basic Course Outline, Texas A & M University Vocational Instructional Service and Vocational Industrial Education, College Station, Texas: Course Outline (vi, vii).

Auto Mechanics: Basic Course Outline, Texas A & M University Vocational Instructional Service and Vocational Idustrial Education, College Station, Texas: Course Outline (vi, vii)

Home Econimics Careers in Food Service, Home Economics Instructional Materials Center, Texas Technological University, Lubbock, Texas. (viii - xiii).

Guadalupe López-Cox
Project Facilitator

## BILINGUAL VOCATIONAL EDUCATION: A MODEL

For decades educational institutions, businesses and service agencies have been confronted with the problem of the limited English speaker. Because of their inability to communicate in the English language, problems have been compounded for this segment of the population. To further complicate the issue, there has been little concerted effort by the professions in addressing the problems of the limited English speaker.

Through the efforts of bilingual vocational education funded under Title I of the Vocational Education Act of 1963, hopes are that problems in education and our society can be or have been reduced for the limited English speaker. Through the provisions of the Act, monies are made available for vocational training programs for this unique population. While these monies will provide incentive for the development of bilingual vocational programs, comprehensive guidelines providing direction for administering bilingual vocational programs have, to date, been absent. Administrators have attempted to create and manage an effective bilingual vocational training program using traditional methods successful in vocational education. Consequently, bilingual vocational training program directors have often been challenged by various leaders for taking a specific course of action in implementing these programs.

The following model is presented in hopes that it will act as a positive catalyst for administrators and teachers, giving them

guidelines for successfully implementing the much needed bilingual vocational education programs. The premise of this model is to formulate procedures in the assessment, counseling, training and placement of the limited English speaking student in a vocational area. Unquestionably, the student is the foundation upon which this model is built.

PRE-TRAINING ASSESSMENT

Upon entering any vocational educational program, a comprehensive assessment of the student should be completed. Items to measure oral and/or written language ability, vocational skills, and career goals must be included in the entry assessment. First, the student's ability in both English and his or her native language must be determined. This part of the assessment will tell the instructional staff how much instruction, if any, can be given in English and how much should be done in the students native language. Results of the language assessment would be an indicator as to how much English as a Second Language (ESL) support will be needed from the ESL instructor.

Secondly, the students' vocational skills or potential skills must be assessed. Determining the potential ability of students is crucial prior to placement in a program of study. Skills which the student might already have must also be determined since the student should not be required to re-train for skills already attained.

The final phase of the entry assessment should be a determination

of the students career goals. Hopefully, potential language and vocational skill abilities will match the student's goals and aspirations.

COUNSELING AND INDIVIDUALIZED PROGRAM OF STUDY

Upon completion of the entry assessment, the student is now ready for intensive vocational counseling and if necessary, more comprehensive or diagnostic assessment. All information derived from the entry assessment phase, including language ability, vocational skills, and aspirations, should be utilized in counseling the student. Vocational counseling should be realistic and in terms of the student's existing ability or potential ability. For those students who aspire for occupations beyond their evident abilities, it is recommended that the student not be told, "you cannot do this." It is, however, recommended that the student be told, "you may not be able to do this." For the student who has the ability or potential abilities, the student should be encouraged to pursue their self established goal.

After the student firmly understands the inter-relationship between personal ability and the program goals, the student is ready for program placement. The first step in this process should be an interview with a teacher in the program selected. The program should be thoroughly discussed with the student by the teacher. At a minimum, items such as ease or difficulty of the courses, time requirements, and job outlook are things which should be covered.

At the conclusion of the counseling session(s), an individualized program of study should be established for each student.

Since this model emphasizes individualism, the unique problems of the limited English speaking student can be easily addressed. An individualized program of study must be cooperatively developed. Program staff, including counselors, vocational instructors and ESL instructors, should work in cooperation with the student in the development of such a plan. The program of study should outline a semester-by-semester plan detailing courses to be taken and in what sequence. The program of study should take into account the student's strengths and weaknesses in language manipulation, vocational skill attainment and other hardship factors which may hinder goal accomplishments.

INSTRUCTIONAL PROGRAM: VOCATIONAL COMPONENT

For the student with limited English-speaking ability, it is urged that an individualized program be developed. The vocational training program must be well organized and include procedures and activities to accomplish each vocational task and skills in manipulating the English language. Criterion tests that assure the instructor and the student that skills have been attained should be part of the overall training program.

Prior to the student entering the class or unit of instruction, a specific pre-assessment (pre-test) should be done. If the vocational program is to be administered on a competency based format, it is feasible to expect that some students may not need to complete

the entire class or unit of instruction. This allows students to start at their own functional level. Students should complete each instructional unit in the sequence stipulated and comprehensive post assessment (post-test) should be administered at the end of each instructional unit. The test should include a performance as well as a written component always keeping in mind that the key in a skill training program is the demonstration by each student to perform.

The vocational program must be sequentially organized to the extent that retraining opportunities can occur. To accomplish this goal an individualized instruction format is suggested. Self-paced modules, audio-visual program units, simulation packages are examples of individualized instruction formats that may be used. Keep in mind that an effective program of bilingual vocational education has, at least, five components:

1. Instruction should, if possible, be given in <u>two</u> languages;
2. Instructional materials must be provided in <u>two</u> languages; (Avoid textbooks if at all possible);
3. Instruction is based upon <u>two</u> cultures;
4. The student must have the opportunity to learn in <u>two</u> languages.
   (In the beginning, learn a new concept in the native language and reinforce it in English); and
5. The vocational teacher and the English as a Second Language (ESL) teacher must work as a team.

The role of a vocational teacher in a bilingual vocational

program is basically two-fold. First, the vocational teacher must teach the student the necessary vocational skills. Secondly, working as a team member, the vocational teacher must provide the necessary vocational language to the ESL teacher. Safety rules, tools list, equipment lists and processes are typical materials which the vocational teacher can provide to the ESL teacher. Remember, the vocational and ESL teachers are a team and must constantly work together, exchanging information and instructing the limited English speaking student. This cooperative effort between the vocational and ESL teachers should lead to free movement of limited English speaking students between vocational and ESL classes as the need arises.

If the vocational and ESL teacher is bilingual, the program will operate much more efficiently. If not, this gap or barrier can be effectively bridged with an individualized program of study developed specifically for "the student" and which is implemented in an individualized format.

INSTRUCTIONAL PROGRAM: ENGLISH AS A SECOND LANGUAGE COMPONENT

The role of the ESL teacher in a bilingual vocational program is supportive in nature with responsibilities similar to that of the vocational teacher, i.e., teaching a skill and working as a team member. The significant difference between the two teachers is that the ESL teacher is responsible for teaching the language of the skill while the vocational teacher is responsible for teaching the skill itself. If the language of the skill is not readily available from the vocational teacher, the ESL teacher must be allowed to make

frequent visits to the vocational class so that vocational language can be identified. Cooperative efforts by the vocational and ESL teachers will insure relevancy of the language to be taught in the ESL class. The ESL teacher must remember that each ESL lesson is planned and developed for the primary purpose of helping the limited English speaker to understand the language of instruction in the vocational class or shop.

By the very fact that the ESL class will be composed of students from various disciplines, the ESL program must be individualized. Procedures and formats similar to those suggested for the vocational teacher to follow in individualizing instruction are suggested for the ESL teacher's use.

POST TRAINING ASSESSMENT

After completion of the individualized program of study, the student should be ready to leave the program. To insure that this is so, a comprehensive exit evaluation is suggested. At this stage of the program, however, the exit evaluation should be a formality since the student was assessed with regularity at the completion of each unit of instruction in the individualized instruction program.

The comprehensive exit evaluation should follow the same format as the unit-specific tests, i.e., performance and written. However, the exit exam should incorporate a language assessment component to be given orally and in writing if necessary by the ESL teacher. The student must be able to understand enough English language to successfully communicate with employers, supervisors, and co-workers in the new job. If

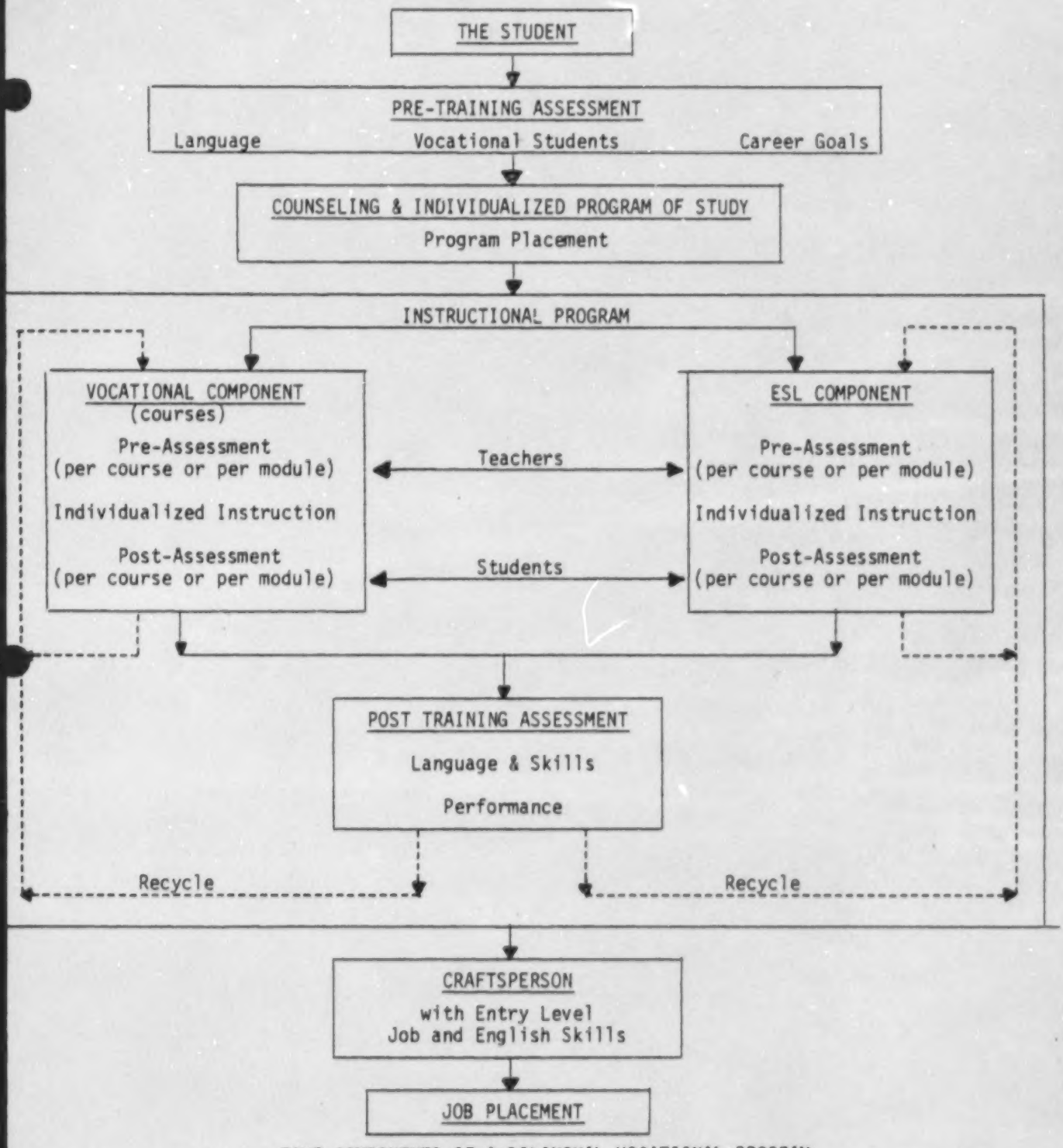
short-comings or areas of weakness are detected in language manipulation or vocational skills, the student should be recycled through the specific units of instruction until the skill is mastered.

## THE CRAFTSPERSON AND JOB PLACEMENT

The mission is nearly over. We now have skilled craftsperson with sufficient command of the English language to enter the job market. Keep in mind and emphasize to the student that he or she now has the skills necessary to "enter" the occupation and to expect placement on the job accordingly.

The final phase of the program is job placement or assistance with job placement. This service may be provided by the training institution, but the student will, almost always, seek the advice and counsel of the teacher. The teacher is encouraged to maintain or assist the placement office in maintaining a data bank of information on job availability. This information will provide the assistance necessary in getting the student placed in a productive job. When placement occurs, the training mission of a bilingual vocational program is accomplished.

BILINGUAL VOCATIONAL EDUCATION: A MODEL




FIVE COMPONENTS OF A BILINGUAL VOCATIONAL PROGRAM

. Instruction should be given in two languages.
Materials must be in two languages. (Avoid Textbooks)
Instruction is based upon two cultures.
. Student must have the opportunity to learn two languages. (Learn original concept in native language and reinforce in English).
. The vocational teacher(s) and the English as a Second Language (ESL) teacher(s) must work as a team.

BILINGUAL VOCATIONAL EDUCATION: A TEAM EFFORT

Traditionally teachers talk about team efforts in planning, developing and implementing educational programs. However, the cooperative spirit seldom reaches the developing stages and rarely ever reaches the implementing stage. Yet, the educational endeavors which have been most successful indicate that a cooperative effort was employed. Bilingual Vocational Education is one example of a successful cooperative effort. There is an ever-increasing population of individuals who have been trained in this type of educational program. If this continues (there is every reason to believe that it will) Bilingual Vocational Education may be one of the most cost effective educational endeavors of its kind in educational history.

Bilingual Vocational Education enjoys this reputation due to the cooperative efforts of vocational instructors and teachers of a second language. This team, for the most part, has put aside their fears of mistrust and selfishness and cooperatively planned, developed and implemented instructional programs that have produced positive results for their learners.

There is little doubt that cooperation has been the key ingredient for successfull training. The vocational instructors have willingly offered their knowledge of specific vocational skill training to the teachers of English as a second language (ESL). In turn the ESL teachers have offered their expertise in second language teaching

techniques. They have done this for the sole purpose of helping others so they can help themselves.

## THE BILINGUAL VOCATIONAL STAFF

The following ingredients are offered as suggestions for the development of a good bilingual vocational educational program. This, by no means, should be construed to be an exhaustive list of key ingredients.

1. Bilingual expertise. The staff should be sufficiently bilingual that no aspect of training should have to wait upon the trainee's learning of English. This does not mean that the staff must have had formal instruction in Spanish in order to participate in the program. On the contrary, the staff that has the flexibility of knowing and using "street language" may be at an advantage. For example, the vocational instructor that knows that "weldeador" ultimately (for instructional purposes) has the same connotation as "soldeador" will gain points with students because they are able to communicate with each other.
2. Willingness to try new ideas. Nothing hinders instruction more than teachers who think they have found the answer to instructional techniques. On the other hand there has been great progress in education because of people who dared to "try" new ideas. Bilingual Vocational Education is a relatively new idea in education and those who have dared to try

it have had good results. Finally, courage to try other than the "lecture method" in teaching must be fostered.

3. Willingness to work with others. It has been said that "no man is an island." In Bilingual Vocational Education it would be hardpressed to find one person with all the necessary skills to implement a sound bilingual vocational program. It takes the efforts of both the vocational instructor and the ESL teacher to carry out this program effectively. Each has skills the other needs. They must plan, develop and assist each other in all efforts of instruction for the limited English speaker in vocational training.

4. Willingness to gain new knowledge and skills. Never in the history of education has individualism been in the forefront as it is today. We must be willing to meet these new challenges through the use of new knowledges and the acquisition of new skills. Programs that respond to the educational needs of all students are usually built on sound learning, instructional and linguistic principles. It is well to remember that these principles have not traditionally been outlined, discussed or disseminated in teacher training programs. Therefore, it may be necessary for instructors involved in vocational training (both vocational and ESL) to gain this information by some other means.

Technological advances have been made in teaching

assessment and material development. Because of the continuous barrage of these new techniques it behooves each teacher to "update" skills in analyzing curriculum, adapting or developing new material, and developing new assessment tools. This activity is very important in Bilingual Vocational Education since there is little commercially prepared material available.

In order to carry out a bilingual vocational program it is necessary for specific procedures to be followed. A suggested list of such procedures follow and are presented in Illustration A.

1. The vocational instructor outlines specific objectives, processes, safety rules, tools, equipment and materials necessary to teach a specific vocational skill.
2. The ESL instructor prepares a list of questions for the vocational instructor. Also, a list of specific materials, etc. essential for preparing ESL lessons will be formulated.
3. The vocational and ESL instructors meet to discuss the plan strategies for a cooperative working relationship.
4. The ESL instructor obtains vocational language. It is essential that the ESL instructor obtain the curriculum from the vocational instructor. From this the ESL teacher will extract essential vocabulary, names of tools, etc. for the purpose of developing his/her ESL lessons. In addition the ESL teacher must be allowed to visit the vocational shops for the

purpose of obtaining grammatical structures and instructional processess used by the vocational instructor in teaching the vocational skill.

5. Develop a monitoring device. The plan will be as good or as bad as the instructors make it. If each instructor does his/her part of the workload, there is little chance of failure. For this reason (but not the only reason) monitoring of developmental activities should be done. Monitoring (progress checks) also serves as a verification process for estimated time of task completion. Everyone involved in developmental efforts should be flexible in regards to estimated time for task completion. REMEMBER, THIS IS A MONITORING DEVICE AND IS NOT CARVED IN STONE.

6. Develop drafts of instructional lessons. Apply learning theory, instructional and/or linguistic principles in the development of instructional materials. Discuss these materials with colleagues and obtain their input and suggestions for improvement.

7. Pilot test materials. Get several students or colleagues to perform the tasks as described in the lesson. Observe their performance and make note of any difficulty the learner is having while performing the task. Remember this is the time to correct any flaws in the material. Experience has shown that the skill of developing material, just as many other

skills, takes practice to accomplish to a satisfactory degree. Therefore, the task of material development should be approached with a positive outlook and with future outcomes in mind.

8. Make necessary revisions. The whole idea of revision is to improve the instructional process to the extent that it will allow the learners to successfully complete the desired task with a minimum of difficulty. Revision may entail as little as deletion of a sentence or amending a sentence pattern or as major as reorganizing the total instructional unit. It is impossible to develop flawless instructional materials. Temporarily these materials will seem as flawless. But as experience accumulates, review of the same materials at a later date will usually result in their improvement in some way.
9. Make copies as necessary. The number of copies needed of certain materials depend largely on the teaching strategy being used by the instructor. For example, if an individualized instruction strategy is used, fewer copies are needed than if a lecture method is used. This is because it is almost impossible for all learners to be at the same learning stage at any given time. It can be expected that no more than 1/3 of the class enrollment will be at the exact same point during the learning process.
10. Deposit material in the instructional material center or a

learning center. The primary purpose of developing instructional material is to allow the individual learner to successfully learn new knowledge or skills in a vocational area. Therefore, these learners should have free access to these materials.

## REINVENTING THE WHEEL

In Bilingual Vocational Education there has been and continues to be a tremendous amount of work done in instructional material development. Essential vocabulary has been identified, lists of tools developed, processess outlined,etc. Most of these materials are in two languages, and in some cases, materials may be in several languages. It is important to have knowledge about these materials and where they can be located. For this reason communication between sites should be initiated and maintained.

Before a materials development project is undertaken, look around, someone may have begun work on a similar project and if you could obtain a set of these materials, the cost to develop them will be reduced tremendously.

## PLANNING THE LANGUAGE COMPONENT

The following questions and answers may assist vocational teachers and ESL staff in planning the language component of the program.

### HOW MUCH AND WHAT KIND OF LANGUAGE IS REQUIRED TO PERFORM ADEQUATELY A GIVEN VOCATIONAL SKILL?

This differs with various vocations. Secretaries need near-native control of a language to function in it. They need control of a large vocabulary, and a high level of accuracy in the skills of spelling, sentence structuring, and word and sentence combining. The keypunch operator needs much less English and can get by with less accurate use than the secretary can. Welders can get by with much less English, provided they can communicate with their supervisors and accurately decode directions. Welding is a low-communication skill. Auto mechanics is essentially low-communication, but in many employment situations, mechanics must deal with the public, placing considerable communication burden on the worker. All vocations in which there is much contact with the customer must consider these communication needs.

The secretary's vocabulary is that of the employer; whatever language the business uses, the secretary must know. Most other vocations have their own vocabulary, ways of forming new words, and rhetorical devices (ways of putting sentences and ideas together). Mastery of these unique forms is essential to communicating on and about the job.

The staff should ask the following questions about the type and quantity of English required by the vocation being trained.

1. How much technical language is associated with that skill?
2. Has the staff identified this language or know how to do it?
3. How accurate does the worker have to be in the use of language?

4. What will be the consequences of many errors?
5. How fast can minimal proficiency in technical language be taught?
6. Who on the staff is capable of making these judgements?

HOW MUCH ORAL LANGUAGE AND HOW MUCH READING IS REQUIRED BY THE VOCATION?

Some vocations, such as secretarial work, require great skill at reading and writing in terms of speed, accuracy and comprehension. Other skills (para-medical, for example) require accuracy as well as quantity in both oral and written language. A motorcycle mechanic or air-conditioning repairman must be able to read technical manuals, but demands to write will be minimal. Workers who must deal with the public need oral skills.

Both training in oral English and in reading English must be directed to job needs. The general "reading laboratory" approach to reading is clearly inappropriate for this program. The reading program should include reading blueprints, charts, tables, and graphs related to the skill--all essential reading skills.

Teachers should ask the following questions about the oral and reading demands of the vocation:

1. Who on the staff will determine the oral and written demands of the job?
2. Who will collect job-related manuals and adapt them for use in reading instruction?

HOW FLUENT IN THE USE OF ENGLISH MUST WORKERS IN CERTAIN JOBS BE?

This is determined by the job being performed and the potential social and employment consequence. The welder who cannot name his tools and processes is going to have a hard time on the job. The health assistant who cannot is a potential danger. The carpenter can get by with less proficiency; the meat cutter with much less. Secretaries, because their language depends on their boss's business, must be fluent.

Some jobs penalize the less fluent speaker. A foreign-sounding dental assistant is a bit frightening, but the foreign-sounding waiter is colorful. The goal of communication is to understand and be understood. The social stereotype of the less fluent speaker should not be discounted, however. It depends on the job and the expected reaction of the client

In some jobs, directions can be given at a comfortable pace and repeated as often as need be. In other jobs essential directions and responses must be processed immediately.

Safety directions and emergency signals, such as names of essential tools, should be taught early and thoroughly. There is no margin for error in this area. In any OJT or hands-on training, safety language should be provided for specifically. This is particularly true of retraining for programs where safety measures may be different in this country.

Teachers should consider the following questions about how

fluent the trainee should be during and at the end of the program.

1. How will the staff determine realistic fluency goals for the program? Is the vocational teacher sufficiently sensitive to language to decide? Can an advisory committee help? Can the staff consult with craftsmen who can give good advice?
2. Where can the language teacher obtain a list of safety messages to teach?

WHAT KIND OF LANGUAGE (VOCABULARY AND GRAMMATICAL STRUCTURES PARTICULARLY) IS CHARACTERISTIC OF A GIVEN SKILL?

Vocational language differs from job to job. Secretarial language is specific to the employer's language and will be hard to designate. For most other vocations one can look in the following areas to designate the language to be learned:

1. Names of all tools. They should be classified as to type, the generic name taught first, then as finer discriminations can be made, new words learned.
2. Names and description of processes and procedures.
3. Safety langauge--signs, rules, verbal and non-verbal signals.
4. Related paper work--orders, reports, bills, etc.
5. Essential on-the-job communication events--foreman to worker, worker to customer, explanations (what and how).
6. Language of trade manuals, parts manuals, directions.
7. Language of vocational instruction (from curricula, texts,

lists of objectives, job descriptions).

Teachers should ask the following questions about preparing to teach job-related language:

1. Who will dig these language features out--isolate them?
2. Who can/will place them in an ESL instructional pattern so they can be taught?
3. Who can place the vocabulary and structures into meaningful sentences and dialogues?

WHAT IS THE PROCESS BY WHICH THE LANGUAGE TO BE LEARNED CAN BE IDENTIFIED?

Step 1 - Gather all materials which help, including inventory lists, and prepare a vocabulary list. This will probably best be done by the vocational staff.

Step 2 - By observing a class of talking to a vocational instructor or reading the vocational curriculum, make a list of sentence structures which are used often. This should be done by an ESL specialist.

Step 3 - The vocational teacher and ESL teacher - together - should set priorities in these materials, in terms of frequency of use, importance of use, and how early in training they will be needed.

Step 4 - The ESL teacher, monitored and helped by the vocational teacher, should structure the gathered, prioritized data into lessons.

An alternate would be to send an aide with some training in language to do Steps 2 and 3 as well as some of Step 1. This use of a lower-level informant and aide could be very useful.

It is imperative that the person responsible for teaching ESL immerse himself/herself in shop or job-oriented language. He/she must go to the shop, gather material, and be sensitive to nuances of meaning as well as rhetorical devices. Neither the vocational teacher or ESL teacher can be permitted to work in isolation.

There are no books (materials) now in existence to teach enough English of any job to make the student functional on the job. General vocationally-oriented materials will not do the job. These projects must be involved to some extent in curriculum development since no existing program meets the need.

Teachers will need to consider the following questions in preparing to teach vocational language:

1. Is the ESL teacher trained sufficiently (in such fields as linguistics) to identify language structures and place them in ESL lessons? If not, who can be called in to assist the staff in this part of the program?
2. How can staff time be arranged so that vocational and ESL staffs work together?
3. What can the Project Director do to encourage maximum co-operation between vocational and language staffs?

HOW GOOD MUST A TRAINEE'S ENGLISH BE?

In the optimum Bilingual--Vocational situation, this is not really a pertinent question. If the instructors (particularly vocational) are themselves bilingual, there is no reason for the trainee's limited English to be a problem; the instructor makes explanations in the student's native language.

The good bilingual program will, on the other hand, understanding graduation requirements and require the trainee to receive part of his training in English. The questions raised earlier, then, of language purpose, is that, the answers lie in each vocation and in the accomodation made in the program for language deficiency.

1. How good must his English be for purposes of training? If the vocational teacher does not adapt his own language and does not cooperate with the ESL program, the trainee's English will have to be very good to comprehend the training. If the vocational teacher persists in lecturing (not a good practice anyway), the trainee needs better English than if the training was hands-on experience. The simpler (number of structures and amount of repetition) the language of training, the less the trainee English be for interaction with peers? (a) A trainee is a good candidate for drop-out if he cannot relate to peers. (b) Much can be learned from

peers, and this resource should not be overlooked. (c) Many jobs and safety regulations require teamwork. (d) The English learned for vocational purposes can be and should be adapted for social purposes.

3. How good must the trainee's English be to get and hold a job? The essential answer differs from vocation to vocation and among employers within a vocation. This will have to be decided in preparing the curriculum. At a minimum the trainee must learn enough English to survive a job interview and the first few days on the job until he can prove his ability to perform the vocational skill.

HOW DIFFERENT IS THE ENGLISH USED IN ONE VOCATION FROM THAT OF ANOTHER?

Nobody at this date really knows, because it has not been adequately studied. Practically all vocational skills have been described systematically, but few people who know language have been involved in vocational "task analysis". Certain assumptions are probably correct:

1. Vocational training is largely a communicative act, and vocational teachers say they fail because students do not learn the language of the trade. Few programs, however, deliberately teach that language; even fewer actually know how to teach it.
2. Workers in one vocation have a hard time communicating with

another trade. For the same reason, craftsmen in one trade are very comfortable speaking of things incomprehensible to others out of the trade.

3. The greatest differences between the language spoken in two crafts probably lies in vocabulary.
4. Conceptual relationships are unique to given trades. Inconclusive and partial studies have been impressed with special use made of such grammatical features as prepositional phrases, clauses, modification. All are devices used to relate ideas and objects in specific ways.
5. Most language teachers treat technical language differently from those basic structures which are present in the speech of all English speakers. This is to say that for purposes of training, a general ESL program will not suffice, no matter how good the program and the teacher.
6. Generic terms for tools and processes may be shared by several occupations. The more discriminations the worker has to make, however, the more sepcific his language must be to his specific job.

WHAT IS A REALISTIC LANGUAGE BASE FOR A SHORT-TERM VOCATIONAL LANGUAGE PROGRAM?

Be able to hear and produce orally:

1. Names of essential tools
2. Brief description of essential work processes

3. Directions

4. Safety Information

5. Basic contacts with supervisors, peers, and clients

6. Explaining needs and giving a reason

7. Explaining how a job was done (a good job or a mistake)

These communication situations will involve basic sentences, phonology, vocabulary, morphology, and rhetoric on which additional language (learned either for job advancements or for social needs) can be based. No one should be allowed to convince the staff that what the trainee needs is the English to bank, shop, and make friends. That is not the purpose of this program. Furthermore, the above is a good base for other language instruction. It can be used as the rung of a ladder.

The general language of the world of work is inappropriate to this program. So is a program of remedial reading, graduation equivalency, or performance levels inappropriate because of their general nature. For all the flexibility they give in the future, they do not zero in on the specifics of the language which will aid the trainee to get and hold a job.

## CAN THE VOCATIONAL PROGRAM AND THE LANGUAGE PROGRAM RUN SIMULTANEOUSLY?

Yes, they not only can, they must run simultaneously. The staff should be suffciently bilingual that no aspect of training should have to wait upon the trainee's learning of English. The trainee should be expected to learn some vocational English ("This is a

hammer." The first day of instruction and use it (reinforce it) whenever the training situation allows.

As much as possible, the vocational and ESL portions of the program should be coordinated so that the trainee learns vocational English in time to use it during his training. Not only should the two curricula--vocational and ESL--be planned together, day to day lesson plans must also be coordinated.

## LINGUISTIC ASPECTS OF VOCATIONAL ENGLISH

The goal of a vocational language program is to learn well that part of English which makes the student employable in American industry. Of all the English that might be learned, the following are selected as being the most important to vocational training:

### PHONOLOGY (THE SOUND SYSTEM)

1. Identify the sounds common to both the student's native language (Spanish, Vietnamese, Chinese) and English (those sounds the speaker already knows because they occur in both languages).
2. Identify sounds unique to either the student's native language and English.
3. Identify matches and plot interference. (This is of critical importance to prevent misunderstanding.)
4. Learn the suprasegmentals (pitch, stress, juncture) which are essentially the same for both languages.

5. Learn the body language (gestures, etc.) unique to both the student's native culture and American culture.

VOCABULARY (THE WORDS OF A LANGUAGE)

1. Learn the 100 English words highest on the frequency list (which comprise some 75% of all English utterances).
2. Select from the next 200 words on the frequency list those most often used in the context of the vocation.
3. Select the vocabulary unique to the vocational cluster.
4. Study semantics (denotation and connotation) of the words selected for the vocabulary.
5. Analyze elements (prefixes, suffixes, etc.) of words most characteristic of the vocabulary of a job.

SYNTAX (GRAMMAR OF THE SENTENCE)

1. Master all inflectional forms (plurals, possessives, tense, adjectives).
2. Master the 50 derivational forms (-or, trans-, ity, etc.) most used in the trade.
3. Master the 5 or 8 basic sentence patterns.
4. Master simple transformations.
5. Teach sentence combining of vocational elements.

REGISTER/STYLE (FOR PERSONAL USE ONLY)

1. Consultative style--information giving or getting, business-

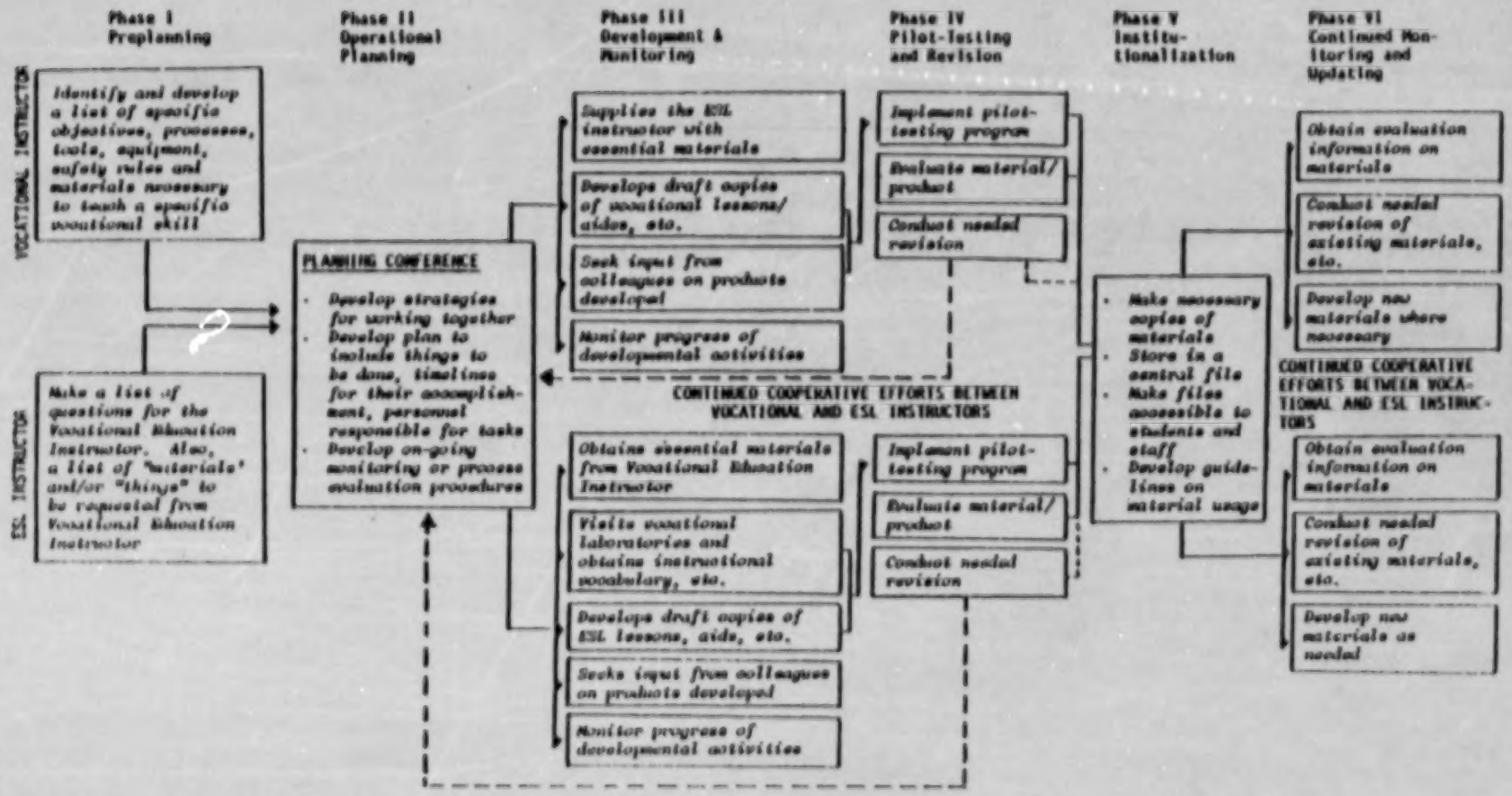
like, factual.

2. Informal--minimum of amenities, direct.
3. Speaker-one listener relationship--avoid group communication for interpersonal communication between speaker and respondent.
4. Use available dialect--use dialect of speaker, no attempt at correction unless there are vocational implications. Seek the dialect (particularly vocabulary) of the job.
5. Topic--prepare for topics essential and helpful to job.
6. Situation--prepare for predictable social contexts of communication event.

RHETORIC (THE FORM AND FUNCTION OF A COMMUNICATIVE PERFORMANCE)

1. Explaining--making and ordering observations.
2. Describing--making adequate distinctions and determining proper sets.
3. Detailing process--sequencing events, achieving adequate specificity.
4. Directing--receiving and giving directions.
5. Persuading--giving cause and effect for job-related situations.
6. Literal--goal is for accuracy, specificity, detail.
7. Social--goal is to get acceptance and response from the other party in the communication event.

## LOGISTICS OF THE BILINGUAL VOCATIONAL EDUCATION TEAM


Phase I
Preplanning
Phase II
Operational
Planning
Phase III
Development &
Monitoring
Phase IV
Pilot-testing
and Revision
Phase V
Institu-
tionalization
Phase VI
Continued Mon-
itoring and
Updating
VOCATIONAL INSTRUCTOR
Identify and develop a list of specific objectives, processes, tools, equipment, safety rules and materials necessary to teach a specific vocational skill
ESL INSTRUCTOR
Make a list of questions for the Vocational Education Instructor. Also, a list of "materials" and/or "things" to be requested from Vocational Education Instructor
PLANNING CONFERENCE
Develop strategies for working together
Develop plan to include things to be done, timelines for their accomplishment, personnel responsible for tasks
Develop on-going monitoring or process evaluation procedures
Supplies the ESL instructor with essential materials
Develops draft copies of vocational lessons/ aides, etc.
Seek input from colleagues on products developed
Monitor progress of developmental activities
Implement pilot-testing program
Evaluate material/ product
Conduct needed revision
CONTINUED COOPERATIVE EFFORTS BETWEEN VOCATIONAL AND ESL INSTRUCTORS
Obtains essential materials from Vocational Education Instructor
Visits vocational laboratories and obtains instructional vocabulary, etc.
Develops draft copies of ESL lessons, aids, etc.
Seeks input from colleagues on products developed
Monitor progress of developmental activities
Implement pilot-testing program
Evaluate material/ product
Conduct needed revision
Make necessary copies of materials
Store in a central file
Make files accessible to students and staff
Develop guidelines on material usage
Obtain evaluation information on materials
Conduct needed revision of existing materials, etc.
Develop new materials where necessary
CONTINUED COOPERATIVE EFFORTS BETWEEN VOCATIONAL AND ESL INSTRUCTORS
Obtain evaluation information on materials
Conduct needed revision of existing materials, etc.
Develop new materials as needed

## TEACHING STRATEGIES AND TECHNIQUES

### BASIC TRAINING LEARNING PRINCIPLES

All individuals have a basic right to an education. This philosophy has been accepted readily by most educators. Furthermore, it has served as a basis to gain educational programming for some segments of the population which have been neglected in the past.

With the acceptance of the basic premise that all individuals have a right to an education comes responsibility. This responsibility includes the charge of providing an appropriate education to all students regardless of ability levels. Appropriate education should be provided regardless of educational goals of students--the vocational oriented student, the college bound student, the special needs student.

Anyone who has attempted the teaching act understands that some students learn faster than others. Some students can probably learn in spite of the instructor (teacher), while some require more structured, individualized and personalized instruction. They need more guidance, direction and encouragement. Giving structure to instruction requires time, planning and insight--commodities that are essential for developing any sound educational program. For the teacher interested in developing a systematic instructional system for his heterogeneous group of students, some basic guidelines may be useful.

To implement systematic instruction it is necessary to apply sound principles and techniques that will facilitate learning. None of these principles by themselves will transform the learning process. However, each has a part to play, and in combination these principles tend to maximize learning. Some of the principles that facilitate learning and make learning more profitable are the following:

1. Never let the student fail.
2. Provide feedback so that the students know when they have responded correctly.
3. Reinforce correct responses.
4. Find the optimum level at which the student should work.
5. Proceed in a systematic, step-by-step fashion so that basic knowledge and habits precede more difficult material.
6. Use minimal change from one step to the next to facilitate learning.
7. Provide for positive transfer of knowledge from one situation to another.
8. Provide sufficent repetition of experiences to develop over-learning.
9. Space the repetition of material over time rather than massing the experiences in a short duration.
10. Consistently associate a given stimulis or cue with one and only one response in the early stages of learning.
11. Motivate the student toward greater effort by:

(a) reinforcement and the satisfaction of succeeding, (b) variation in the presentation of material, (c) enthusiasm on the part of the teacher, and (d) optimal length of sessions.

12. Limit the number of concepts presented in any one period.
13. Arrange materials with proper cues for attention.
14. Provide success experiences.

Adapted from: Educating Exceptional Children, by Samuel Kirk, Houghton-Mifflin, 1972.

Although these principles are applicable to all students, it is particularly necessary with students who have difficulty learning subject-matter which is foreign to them. They face enough failures without having to repeat them over and over again in a classroom situation.

PROCEDURES AND CHARACTERISTICS OF A LESSON

For any classroom teacher the transition steps in implementing lesson plans are crucial. Teaching the information to students in a way they will remember it is considered important by most teachers. And, traditionally, teachers seek new ideas on how to become better teachers.

The following information details steps and suggestions on "how to" deliver a lesson. Points outline in this section thoroughly consider learning theory. Therefore, these points are valid and have been used successfully in the teaching process.

Get Ready to teach! This includes working out teaching plans,

arrange classroom, tools, equipment, materials, supplies, instructional aids and the like. Arrange the work station as the worker is expected to keep it. In other words, the teacher has made all necessary preparations for teaching the lesson.

Instruction is based on the ideas of learning that there must be two-way communications, both in telling and doing, between the teacher and learner. Thus the teacher must (1) prepare the learner; then (2) present the job or information by telling, showing, explaining, demonstrating, discussing or illustrating, one point at a time; then (3) help the learner apply the skill or information until the desired habit is formed; and (4) follow through by verification or evaluation on the success of the training; (5) SUMMARY, even though this is shown as the last stage of the lesson it does not necessarily mean the summary must be given last. A summary may be given at any point in the lesson that the teacher deems necessary and helpful to the learners. It is important to realize that these stages apply in any instructional situation, whether it is trying to communicate an idea or the skills of a particular job. Its logic is so clear and so undeniable that the Five-Stage pattern has rightfully earned a reputation as the appropriate starting point for anyone who wants to improve his skills of instruction. The following is a detailed explanation of the stages and suggestions for their implementation:

Stage 1: PREPARATION (MOTIVATION)-prepare the student for

instruction

A. Put the student at ease.

B. Explain the lesson and its importance.

C. Create Interest.

Stage 2: PRESENTATION - of the information or skill

In teaching a performance lesson every student should see every movement without having to reverse it in his mind--the alert teacher will place the students so that each one can see every movement and hear every word. This usually means a small group or an individual student placed to his right or left facing the same direction as the teacher.

A. Follow job breakdowns for teaching performance lessons.

B. Follow preplanned, organized topics and teaching points when teaching information.

C. Explain, demonstrate, and instruct one step at a time.

D. Stress key points or teaching points.

E. Don't tell too much at one time.

F. Use simple language.

G. Don't do all the talking.

H. Set a high standard.

I. Give reasons for methods or procedures.

J. Show one thing at a time.

K. Give everything expected back, but no more.

Stage 3: APPLICATION - or try out performance by the student

A. Have students do the job or apply the information.

B. For skill or information lessons have students verbally tell you the steps in completing the task. Make sure that they can stress the main points.

C. Correct errors and omissions as students make them or before, if possible, keeping the following points in mind:

1. Avoid Criticism.
2. Compliment before correcting.
3. Let the students correct themselves.
4. Don't overdo correcting.
5. Don't be too quick to blame the student. If students don't do something right, the fault may lie in methods of teaching.

D. Encourage the student.

E. Get back everything you gave students in Stage 2.

F. Continue until YOU know students know.

Stage 4: VERIFICATION OR EVALUATION

A. Put students on their own to do the job or to apply the information.

B. Encourage questions from students and be sympathetic to all their questions.

C. Check frequently.

D. Let students know how they are doing.

E. Evaluate Continuously.

Stage 5: SUMMARY or review

The teacher must select the appropriate time for giving a summary or review. Many times the summary is given at the time the student is ready to apply the skill or use the information as presented by the teacher in Stage 2. The teacher may summarize or have the students summarize the steps of procedure or "what to do" and emphasize the key points (how, why and the safety precautions) and give the checking standards for performance lessons. For informational lessons the teacher may have the students to outline or explain the main points as given for each topic. The alert teacher will select the appropriate time and place in the lesson for the SUMMARY whether it is after Stage 2, Stage 3, or Stage 4.

If proposed lesson is a valid learning unit, it will possess several definte characteristics, namely:

1. Unity--The lesson must be a whole of content and accomplishment, complete within itself.
2. Contains some new element--The lesson must contain something new, according to our definition of learning. This constitutes the essence of the learning assignment. The new element may be a new idea or skill or a new degree of proficiency.
3. Properly related to other lessons--The lesson must be preceded by topics that are necessary for understanding the

the lesson, and may in turn serve as a foundation for succeeding lessons.

4. Reasonable in Scope--The lesson must have sufficient content to challenge the learner's best effort, but must not cover so much ground that he cannot comprehend it or cannot complete it before tiring of it. A common mistake of inexperienced teachers is putting too much into a lesson or assignment.
5. Provides for suitable activity by the learner--The learner must learn to do by doing, and his practice or drill is just as important as the presentation and checking by the instructor. The lesson must include learner practice of skill or application of information.
6. Requires Measurable Accomplishment by the Learner--Every learning assignment should state specifically what the learner is to achieve from his learning effort, and should indicate the standards by which the learning will be verified by the instructor.

LESSON PLANS

Every teacher has the responsibility to teach each of their students the information necessary for them to perform specific tasks successfully. It is also the teacher's responsibility to devise or create an interesting and stimulating learning environment. Part of this preparation should include lesson planning.

Each lesson plan should closely relate to the task heirarchy which has been identified for a specific vocational area. If the task analysis has been done appropriately, each task should be easily translated into a teaching-learning unit, or more simply, an instructional unit.

Instructors need a plan on how to carry out their teaching assignment. By developing a plan the instructor brings together all avialable resources at his disposal as a means to teach a specific task. The contents of a lesson plan may vary with its use. However, each lesson plan should contain information about three basic things. These are as follows:

1. The objective or what each student will learn.
2. The activities or how each student will learn what they are supposed to learn.
3. Evaluation or how each student will be checked to see if learning has occured.

Every other activity that is included in a lesson plan is, in some way, related to the three basic components. This is because these three basic components address what instruction is all about. A lesson plan may include other specific information, namely:

- tools, equipment and materials needed to teach the lesson;
- instructional aids required for the presentation (overhead projector, filmstrip projector, slides, charts);
- prerequisites needed by the student (texts, study assignments

- needed to be read prior to learning the lessons, uniforms, supplies and equipment needed to be brought to class by student);
- estimated time required for lesson;
- personal notes as reminders to insert the use of some piece of equipment or materials such as an overlay, a kit, flip chart, etc.;
- references and/or suggested readings of related instructional material on the subject;
- list of questions which help the student to summarize the entire lesson. These questions may act as a checklist for the student of the things he needs to know prior to evaluation;
- a list of safety rules or precautions related to the specific lesson;
- list of exercises to provide opportunity for practice for a student; and/or
- summary of the lesson including major points and safety precautions.

It is well to remember that classroom teachers who are deligent in planning their lessons will become better teachers in that they become more efficient and more effective in their instruction. This is due to the fact that the teacher can amend instructional strategies based on data gathered while lesson plans are being implemented. In

this sense lesson plans are important.

There is no "best" lesson plan format in existence. Therefore, each instructor should be creative in developing his or her lesson plan format if one is not required by his employer. Before an instructor invests time in creating lesson plans, the school or college policies on the matter should be investigated.

If there are no requirements for following a specific lesson plan format, the instructor would be wise to review literature on the subject of lesson plan content. After having a firm grasp on the purpose of lesson plans, instructors should design their own lesson plan format. Remember, the object of a lesson plan is to help the individual instructor organize the teaching process so that students will learn efficiently and effectively from the instruction.

SELF-INSTRUCTIONAL MODULES

Use of self-instructional, performance based modules has or have begun to establish itself as a viable alternate means of instruction in technical subject.

(1) Break your course into units; each with its own pre-test.

(2) Units are keyed to a specific test, workbook or other resource, which provide the base for learning experiences in each module, and these references are included in the module package. The modular approach increases possibilities for self-pacing, individualization, personalization, and independent study. Individual students are held

accountable for their performances because the program is completed only when the student demonstrates the competencies identified as program objectives. In modular learning, time is variable, not a constant. Instruction is highly personal and situation oriented and the individual learning experiences are guided by feedback sucah as check-lists, self-tests, and examples.

(3) Suggested Parts of a Module

(a) Title

(b) Unit Module Number

(c) Prerequisites

(d) Directions

(e) Introduction

(f) Performance objectives

(g) Pre-test

(h) Learning experience

(i) Post-test

(j) Reference List

(k) Check Sheets

(l) Example Sheets

General directions guide the user through the modular activities which lead the learner to accomplishment of performance objectives.

The prerequisites specify the competencies which the student must possess before a given module is begun. They should be kept to

a minimum and include only those competencies that must be acquired before learning activities can be initiated. Some modules thus require no prerequisites.

The instruction section includes a statement indicating the purpose of the module, gives an overview of the module content and indicates the student's need for the module (motivation). It may also establsih congruity of a particular module within a set of modules.

Each performance objective should state the activity to be performed, describe the conditions under which the performance is to take place, and specify the level of acceptable performance. Performance objectives must be prepared to guide the learning activities and lead the learner to the desired level of competency which can be demonstrated through cognitive, effective, or psychomotor behavior.

The pre-test provides a means of preliminary evaluation of the student's current level of attainment of the competency specified. At this point, the student is given a choice. Directions on the cover page explain. "Examine the pre-test, then:

(a) If you do not wish to attempt the pre-test, proceed with the learning experiences, or

(b) If you believe that you can now demonstrate the desired skill and knowledge and wish to attempt the pre-test, then do so at this time. If you successfully complete the pre-test, you may choose not to complete the module."

Learning experience include a variety of activities designed to permit the learner to have sufficienty developmental experiences which will lead to the attainment of behavioral objectives. The learning experiences should have an instroduction and should serve to provide motivation and humanize the module (speak directly to the student when possible). It should also include a self-test, check-list, and other feedback devices.

HANDOUTS

Any professional who has attended a workshop, conference, institute, etc., is plagued with the obsession of acquiring "handout" material. Psychologically a conference participant usually feels better if (s)he has received handouts. This phenomenon is not all psychological; however, since handouts do have a useful purpose.

In conferences or in the classroom the handout is an important tool in delivering a point to an audience. In this sense the handout has as its primary purpose to provide the reader with information on a specific topic. Often times this information is supplemental to the total presentation and gives a more detailed picture of some topic or point being discussed. As opposed to being supplemental, the handout can also provide information which is focal to the topic to be discussed, i.e., the handout information is the topic to be discussed.

There is not magic formula as to the number of handouts to use. There are too many factors that prevent firm guidelines from being established on the number of handouts to use. However, a large

quantity of handouts with numerous pages should be avoided since this practice is contrary to good teaching strategies and basic learning principles.

Handouts are useful in almost any situation in which classroom teachers find themselves, especially in the theory of training process. Specifically, the teacher may want to use a handout to give each student a personal copy of the material begin discussed. With the material in his/her possession the teacher can require each student to focus attention on specific points of the handout during explanations and/or discussions. Furthermore, the student is provided with a permanent copy of the material to which (s)he may refer when necessary.

How long should handouts be? A handout should be long enough to cover a specific topic and short enough to hold the interest of the reader. The handout can be a one-pager or a ten-pager depending on the point(s) being discussed.

The kind of information that is appropriate for handouts is as varied as the creative ability of the user. This means that just about anything goes as far as the type of information that can be provided through handouts. Usually, this type of information consists of the following:

1. Tables, graphs and charts containing demographic data;
2. Models and drawings of a vocational nature;
3. Highlights, major points and summaries on a give topic

"Illustration B"

EASY SLIDES

| | | |
|---|---|---|
| TERMS<br>&<br>PHRASES | TOOLS<br>EQUIPMENT<br>PROCESSES<br>DIRECTIONS | EXAMPLE<br>(EJEMPLO) |
| VOCABULARY<br>****<br>VOCABULARIO | TOOLS<br>HERRAMIENTA | INSTRUMENT<br>INSTRUMENTO |
| EQUIPMENT<br>****<br>EQUIPO | PROCESS<br>PROCESO | DIRECTIONS<br>DIRECCIONES |
| PARTS<br>INSTRUCTIONS<br>RULES | PART<br>PARTE | RULE<br>REGLA |

Step #1 - Draw the picture or place the words inside the inner square.

Step #2 - Xerox the page if needed. This may depend upon the ink you used in making the drawings.

Step #3 - Make a transparency of the xeroxed page.

Step #4 - Cut out the squares using the outer square.

Step #5 - Mount each square in a slide frame.

Step #6 - Place the slides in sequence in the carousel.

NOTE: The sample slides given are used as examples and not offered as content ready for use.

SIMULATION ACTIVITIES

Simulation is emerging in education as a significant teaching technique as students and teacher both become increasingly aware of the need for relevancy in education. Although many definitions of simulation have been used as the techniques has developed, in this unit, simulation will be considered to be "the creation of a realistic environment with life-like problem-solving activities related to present or future related to present or future real experiences." The simulation techniques of in-basket, equipment, case study, gaming, and role-playing will be included under this definition and their use explored through the learning experiences of this module. Since role-playing is so frequently used in the classroom, special emphasis is given to it. Not only are there many different types of simulation, but numerous applications may be made of each type in the various occupational specialties.

Simulation techniques can be used to involve students in decision-making and problem-solving situations they are likely to encounter in the real world such as dealing with employer-employee relations. Students' experiences in the "real world" can be decidedly easier if they have had the opportunity, through simulation experiences, to test their skill first in a classroom or laboratory setting in which the consequences of failure are less threatening.

In-Basket Simulation

The in-basket technique gets its name from the materials which are its key element. The technique is basically a decision-making exercise structured around a realistc situation. Participants assume the role of decision-makers and react to materials provided them, such as letters, memoranda, and other papers which can be found in the incoming mail or in-basket. This technique focuses on a student's ability to set priorities and carry out tasks. An example of an in-basket experience might be that of a basket placed on a "secretary's" desk containing:

1. A letter to be typed for the supervisor within the hour
2. A memo to be sent to an associate cancelling a luncheon appointment.
3. A request that the "secretary" make dinner reservations for the supervisor and a client.

The "secretary" in the simulation experience would be requested

to set priorities and perform the tasks required. At any time during the experience, additional items could be placed in the in-basket to cause the "secretary" to need to realign priorities, e.g., a phone call urgently requesting some important information.

The in-basket technique provides a meaningful situation which requires the budgeting of time and setting of priorities for the performance of tasks, as well as the demonstration of the competencies involve in carrying out the tasks.

Equipment Simulation

This type of simulation is useful when instructing vocational students who ment in the vocational laboratory, but with some type of equipment simulation the student can acquire the next best experience. The design of an equipment simulation must include machines that require an operation to be performed in the same way it would be in real life, but without the extraneous features that would interfere with the basic learnings. The simulator must be designed so that the user has essential controls to manipulate and practice on just as he/she would in real life. For example, a driving simulator allows the user to react to realistic visual stimuli which he/she might encounter in actual traffic. Feedback must be provided, so that the student can evaluate his/her responses and not continue to make the same mistakes. Stimuli not central to the experience are omitted deliberately, such as closing the car door, stopping at a gas station, parking in the garage, etc. Malfunction simulators have relatively

complicated computerized consoles which allow students to trouble-shoot a malfunctioning piece of equipment by pressing buttons to simulate performing a repair task. The computer then feeds back information describing the results of the student's action. Another more complex example of simulation involving equipment is that of a completely simulated auto mechanics shop, in which students work on actual cars under the supervision of their teacher. In this simulated situation, not only do the students learn to repair cars, but they may also learn how to operate an auto mechanics shop.

Role-Playing

Role-playing is an "acting out" of a situation, problem, or incident which is of conern, e.g., in a job training class. Customer relations could provide conflict situations to be clarified by role-playing. In this technique, participants assume a role in a serious effort to think and act as a designated character would be likely to do in a given situation. It is especially effecitve with small groups and should always be set within a frame-work of group participation for discussion and analysis, as the audience can learn from observing and evaluating as well as those involved in the actual role-playing.

The role-playing is an unrehearsed dramatization in which the players attempt to make a situation clear to themselves and to the audience by playing the roles of participants in the situation. To attain his purpose the playing of the roles must be kept close to the reality of the situation, but still allow the players to react freely and spontaneously.

Role-playing is not a magic technique by which all teaching problems can be solved. It is an important technique which requires skill to use properly so as not to produce harmful effects instead of the desired outcomes.

## THE LECTURE

The lecture is the most frequently used and abused of all teaching methods. By itself, it is so ineffective that it hardly rates being considered as a separate teaching method. It is best used in combination with other methods and is a valuable "tool" of the teacher who recognizes and appreciates its merits and limitations.

### Possible uses

-- to introduce a new topic.

-- to create interest.

-- to describe an experience.

-- to summarize a lesson.

-- to explain key points as you demonstrate.

-- to supplement other methods.

### Misuses

-- to describe manipulative processes.

-- to explain highly technical subject matter.

-- to describe complex objects.

Improve By

-- use of teaching aids.

-- good voice, delivery, and a certain amount of "salesmanship.

-- spelling technical and unfamiliar words

-- simple analogies and everyday comparisons,

-- concise and simple definitions

THE DISCUSSION METHOD

The discussion method provides opportunities for individuals in a group to "pool" their experiences and ideas concerning a subject or problem. Its uses in teaching are many and varied, but if the instructor or leader is not skilled in the techniques of leading a discussion, the results may be totally unsatisfactory.

Possible Uses

-- at the beginning of a lesson to stimulate interest.

-- to stimulate student participation.

-- to collect experiences and ideas.

-- to promote common understanding of a subject or problem.

-- to modiy opinions and attitudes

-- at the end of a lesson to summarize or review.

Misuses

-- to present new information.

-- with immature or unknowledgeable students.

Improve By

-- planning the main topics to be covered.

-- listing and organizing ideas

-- participation of the entire group.

-- by informal rather than strict procedures.

DEOMONSTRATION TECHNIQUES

In a shop demonstration, the instructor--using real tools, machines and materials--shows the student what he is supposed to do by acutally performing the skill or task and explaining what he is doing and why. Included in the explanation are key points and cautions as they are needed. In a so-called laboratory demonstration, the instructor demonstrates--with apparatus--a natural law or phenomenon to a group of students.

Possible Uses

-- to show a student how to do a task.

-- to show how a piece of machinery or equipment operates.

-- to clarify a theory.

Misuses

-- as the only means of teaching.

-- when taking notes is required.

Improve By

-- setting up and rehearsing in advance.

-- limiting a group demonstration to a few individuals.

-- arranging students so that all can see the work from the same position as they will normally be working.

-- performing tasks at normal speed first, then repeating at slower speed.

STUDENT ACTIVITIES

Everyone knows "we learn to do by doing." But merely doing things without the direction and guidance of an experienced person and without a definite purpose in mind, has little educational value. Student activities may be guided and directe through use of written lesson assignments, job sheets, workbooks, projects, experiments, supervised drill or practice, and the like.

Possible Uses

-- to supplement other methods of instruction.

-- to save time in teaching.

-- to boost the slow student.

-- to enrich the instruction of the advanced student.

-- to create and maintain student interest.

Improved By

-- clear and adequate directions or procedures.

-- adequate references (if needed).

TEAM TEACHING

Team teaching is not a mere method. It is a means to program improvement, professionalization, and individualized instruction. In addition to the advantages of achieving the main purposes, team teaching provides professional opportunities for the following:

a) Staff involvement with curriculum concerns.
b) Opportunities for leadership and followership.
c) Peer-group recognition.
d) The nongraded approach.
e) Individual study opportunities in depth.
f) Involvement of "special" teachers (librarians, guidance counselor, teachers of ESL) in the "regular" class offerings.
g) Opportunities for teacher specializations.
h) Expansion of supervisory roles of peers and administrators.
i) Opportunities for teachers and students to have variety during the day.

Some disadvantages deal with attitudes of team members:

a) Failure to communicate clearly and openly.
b) Lack of attention paid to details and follow-up.
c) Teachers may idle away time.
d) Teachers may not evaluate each other on a professional basis.
e) A prima donna may emerge.

None of these problems is insurmountable. Real teamwork can solve these difficulties.

Teachers have no justification for jumping into team teaching if they do not know how to use the techniques which make team teaching successful. The community has too great a stake in education to be contented with half measure or with education conceived in purely selfish terms. There is no magic charm to team teaching. As one group of authors warned: "Let it not be assumed that members guarantee

success." As E. K. Thorndike so aptly expressed it - "Pooling the ignorance of a thousand is no more enlightening than the ignorance of one."

On the basis of the teachers' knowledge of students individual abilities and needs, the team could determine those aspects of the lesson to which all students could profitably be exposed (large group), where small or individual lessons would be required, where independent activity was desirable, etc. The team could then determine what kind of groupings and re-groupings they wanted in each case. The desired kind of interaction between teachers and materials would determine the specific instructional techniques, for example:

1. lecture
2. discussion
3. activity student

Prior to the initiation of the unit, the team should determine the desirability of formal tesing before and after the unit as means of measuring the effectiveness of the completed unit. In many instances, a less formal procedure might be satisfactory.

One of the most important characteristics of a good team teaching program is the large degree of interaction among participants team members. Thus, it is true that each lesson is subjected to analysis by members of the team. They constantly review what they have done, discuss the shortcomings and virtures of each step taken,

and probably make more corrections in ascertaining efforts than would be true under the closed-door policy.

## DEVELOPING AN INDIVIDUALIZED INSTRUCTION PROGRAM

### PLANNING

Prior to developing an individualized instruction system there are some basic steps that need to be accomplished. These include at least the following three steps:

1. Establish the need for individualized instruction by documenting achievement levels of students enrolled in the program. Show the varied rates of learning of students involved and the different learning styles required by the student group. Document cultural and linguistic differences of the student population.
2. While an individualized instructional system can be implemented without administrative support, those involved in its development and implementation will find the path easier to follow if their efforts are supported. Acquire the commitment from the administrator(s) in charge of the program.
3. Identify existing resources which will aid in the development and implementation of individualized instruction. All personnel (colleagues) who are interested in individualized instruction, as well as materials that can be used in the system, should be identified. Professionals identified will form a manpower pool who can be supportive in developing and/or locating instructional materials for the individualized instruction program. Among other problems in which the

manpower pool can become involved are:

a. identifying and verifying skills hierachies
b. evaluating and refining materials and strategies used in implementing individualized instruction
c. collecting and disseminating to colleagues and administrators evaluation information regarding the individualized instruction system and materials

IDENTIFICATION AND SEQUENCE OF SKILLS

Any good instructional system will contain goals and objectives. Furthermore, the objectives are usually prioritized or sequenced into a meaningful hieracny.

The primary prerequisite to identifying and sequencing skills is knowledge of the overall subjbct in question, i.e., the purposes of the content area and the concepts to be taught in the subject area. For example, a classroom teacher needs to know the interelationship of concepts that make up the specific content area in question. This goes beyond knowing the range of skills to be taught from grade level to grade level. In essence, what the classroom teacher needs to know is the concepts to be covered in a given subject area without consideration of grade levels.

Concepts and skills are the crux of any instructional system. The process and effort in identifying these concepts and skills should be given a great deal of thought and planning. .Well planned concepts are necessary in that they provide a roadmap to instruction. Once these concepts have been laid out, the instructor is ready to isolate specific skills making up each of the concepts. For example,

in the occupational area of auto mechanics, the concept of tune-up can be broken into the specific tasks of testing cranking system, testing compression, testing charging system, testing ignition system and testing fuel system.

It is suggested that a teacher starting for the first time in attempting to individualize instruction should select a subject with which (s)he feels very comfortable. It may be worthy to note that it has been found that it is easier to individualize subjects which are structured and performanced based. For example, arithmetic is very structured and lends itself to task analysis treatment. Vocational education is an area that lends itself exceptionally well to this strategy since performance as criteria for success is of primary importance.

In order to avoid significant gaps in the sequence it should be checked and verified by:

(1) Getting several tests on the subject and check the sequence of skills as specified in the books. There will probably be differences between texts in the skills covered in each book. But there will also be some overlapping. It is suggested that skills from each text appear in <u>your</u> sequence if these are essential.

(2) Asking experienced colleagues to check the sequence (a) to see if any concepts, tasks or skills have been left out and (b) to check the order of the sequencing itself.

(3) Relying on your own personal expertise. For the novice teacher it is suggested that the other approaches mentioned previously be followed Because an instructor has experience in teaching the subject matter in question, (s)he is the best resource for knowing the problems faced in teaching the subject. Pitfalls as well as the positive points are known. The instructor knows the order in which (s)he presents the subject-matter. In essence, then, the instructor is the expert in the subject-matter.

(4) Use other sequences. If other sequence can be found, it will certainly help in establishing one for a specific situation. Hardly ever will a sequence be found that is exactly what is desired. The instructor's experience weighs heavily in the decision on what to teach and in what order. However, existing sequences will help in that

(a) a roadmap (a guide) to follow is available,

(b) some of the concepts and skills in the existing sequence will probably be similar to those desired for the local situation, and

(c) there may be something in the sequence that will <u>add</u> to the sequence being developed.

In summary, the first essential step in developing and individualizing the instruction system is to identify the crucial concepts and skills (tasks). Equally as important to their identification,

concepts and skills must be placed in a hierarchy and verified by "experts" in the field. Specifically, the procedures in identifying crucial concepts and skills are as follows:

1. Gather texts or existing sequences for a specific subject area.
2. Develop a preliminary list of concepts and skills.
3. Verify the list of concepts and skills as to its order and completeness.
4. Refine as necessary based on feedback.

CRITERION TESTING: DEVELOPING

Classroom teachers can develop their own informal (criterion-referenced) instruments. Following are three of the most basic skills necessary in developing such an instrument.

1. Knowledge of overall content (subject matter) area.

   A classroom teacher needs to know the inter-relationship of concepts that make up the specific content area in question. The traditional grade levels are not considered as meaningful in this step. In fact, the content area is analyzed from the standpoint of its place in the total school curricular structure. An example of this knowledge would be that the automechanic teacher should know that automechanics is comprised of several specific concepts such as carburation, wirings, transmission, front-end

etc. (S)he would also know that each of these concepts can be broken down into finer steps or subconcepts. Ultimately, though, (s)he knows that each of these are dependent on each other in order for the automobile to function appropriately.

2. Isolate specific skills and develop a hierarchy/continuum. Each of the general concepts must be analyzed further as to makeup of the concept. For example, in automechanics, the front end is made up of items such as wheels and tires. Steering mechanisms, front suspension, brake mechanisms, etc. As each of the concepts are analyzed and broken into skills they are placed they are placed into a hierarchy/ continuum. Brief statements that capture the specific skills such as "bleeding wheel cylinders" make up the continuum.
3. Develop problems that exemplify each identified skill. Each of the components (skills) identified and making up the continuum must be represented by a problem situation in the testing instrument. Remember, the purpose of the test is to pinpoint the place on the hierarchy of skills at which the student can successfully perform. The purpose is not to ascertain the rank or standing of the student among his peer group.

In the vocational skill areas the criterion reference assessment may take on an active role, i.e., the student may be required to show by "bleeding the brakes" as a test

of his ability to do so. Of course, there will be some pencil-paper components of criterion-reference assessment in vocational skill areas as well. Ultimately, however, the test of obtaining a vocational skill is the actual performance of that skill.

CRITERION TESTING: ADMINISTERING

The key to remember is that the purpose of criterion-referenced testing is to find the optimum level of performance of a student so that he/she be placed in a curriculum continuum at a place where he/she can succeed and maximize his learning.

1. Administer tests in small doses.

   It may be wise to develop the test in segments, i.e., develop one segment that tests the student's skills in carburation, wheel balancing, etc. The testor should be able to use each of these segments independent of each other. Additionally, the test items could be keyed to the curriculum structure/sequence. Hence, when a student peaks out in a given skill, the examiner would know precisely on what activity the student needs to begin learning a new skill.

2. Make each test page palatable.

   The examiner should try to avoid testing situations which are frustrating and frightening for the student. In fact the examiner is trying to make the testing situation such that the student will feel that the purpose of the test is

for his benefit. Palatability can be increased by:

a. putting fewer problems on a page;

b. organizing material on the page creatively;

c. adding color to the page in some way;

d. reassuring the student during the assessment process; and

e. allow interaction to take place between the student and teacher not about the test but about other subjects. If this becomes distracting handle the situation gently as this may destroy raport which may then affect performance.

3. Always score the placement test immediately.

Information on the performance level of a student is needed immediately so proper placement may be made. If individualized instruction is to be successful, the examiner (teacher) cannot postpone scoring the placement test. Postponement of this particular activity will only defeat the purpose of individualizing instruction.

4. Keep the placement test.

The placement test acts as a record of the studen's abilities in the subject matter in which he was tested. It contains baseline information which is essential in planning his educational program. Additionally, the placement test serves as a record of the teacher's efforts in dealing with the educational endeavor. It may help if the teacher

is to have conferences with his/her colleagues, administrators, or the students themselves.